

La., Iowa, Minn., Ky., Ga. 7th, Ala., Dak., Ind., Nebr., Ohio, Va., Fla., Iowa, Minn., Ill., Ga., Mo., S. C., Tex., Wis. 8th, Ala., Conn., Ind., Kan., Md., Mass., Nebr., N. J., N. Y., Ohio, Pa., Tenn., Va., Wis., Dak., Montana, Ind., Ty., Fla., Minn., Mich., W. Va., Ill., Ky. 9th, Conn., Dak., Del., Kan., Me., Md., Mass., Nebr., N. J., N. Y., Pa., Va., Wis., R. I., Tex., Fla., Ala., Miss., Minn., Mich., Ill., Iowa. 10th, N. Y., Col., Conn., Dak., Iowa, Mass., Mich., N. J., Ohio, Pa., Vt., Va., Montana, Tex., Ala., W. Va., Md., Wy. Ty., Ill., Nebr. 11th, Ala., Col., Ill., Ind., Iowa, Mass., Ohio, Va., Wis., N. M., Dak., Tex., Minn., N. Y. 12th, Col., Del., Ind., Md., N. H., N. J., N. Y., Ohio, Pa., Va., Fla., N. M., Tex., Minn., Dak., Mich., W. Va., Wy. T., Ill., S.C. 13th, Col., Ind., Kau., Miss., Ohio, Va., Dak., Tex., W. Va., Ill., Ky., Fla., Ga., N.C. 14th, Col., Dak., Ia., Kan., Me., Mass., Nev., Tex., Minn., Wis., Mich., Tenn., Ga., S.C., Ill. 15th, Ill., Mass., Fla., Utah, Col., Tex., Dak., Minn., Wy. Ty., Ia. 16th, Dak., Va., Neb., Kan., Fla., Minn., Wis., Mich., Ia. 17th, N.Y., Ill., Ind., Kan., Me., Mich., Mo., N. H., Vt., Va., Wis., Fla., Ia. 18th, Dak., Ind., Mass., N. H., N. J., N. Y., Ohio, Pa., Va., Ill., Tex., Minn., Ia., Mich., Ky., Ga., Mo., Neb. 19th, Col., Ia., Md., N. J., N. C., Pa., Tenn., Va., Dak., N.M., Tex., Fla., W. Va., S. C., Mass., Ill., Mo., Neb. 20th, Col., Fla., Ill., Md., Neb., N. Y., Ohio, Tenn., Va., R. I., Ind., Wy. Ter., N. M., Ala., Ga., Ia. 21st, N. Y., Col., Conn., Kan., Me., Md., Mass., N. H., N. J., N. C., Pa., Tenn., Vt., Va., La., Ga., R. I., S. C., Tex. 22nd, Col., Dak., Miss., Va., Wy. Ter., Mont., Fla., Tex., S. C., Ga., Utah. 23rd, Col., Dak., Kau., Vt., Utah, Nev., Mont., Tex., Ala., La., Fla., N. H., Wy. Ter., Neb. 24th, Col., Kan., Fla., Mont., Tex., Wy. Ter., Ia. 25th, Col., Kan., N. H., Wis., Fla., Utah, Wy. Ter., Neb., Minn., Ia. 26th, Col., Ga., Ill., Ind., Mo., N. Y., Tenn., Ind. Ter., Tex., Ala., Fla., Ia., Ky., Utah. 27th, Col., Ga., N. C., Tenn., Va., N. M., Neb., Dak., Tex., Ala. 28th, Ga., Kan., Neb., N. C., Tenn., Va., Dak., Tex., Ala., Miss., La., Mo. 29th, Dak., Del., Ga., N. C., Ohio, Pa., Tenn., Va., Fla., Minn., W. Va., Ill., Md., N. J., Tex. 30th, Ala., Ind., Neb., N. J., Ohio, Va., Kan., Minn., Mo., Mich., Ga., Ill., Ia., S. C. 31st, Dak., Ill., Ind., Ia., Mich., N. J., Ohio, Va., Ala., Tex., W. Va., Ga., S. C., N. C., Md., Neb.

Auroras.—Clear Creek, Neb., 1st, 2nd, 3rd; Milwaukee, Wis., 15th; Flushing, N. Y., 25th; Vevay, Ind., 21st, 31st.

Magnetic Phenomena.—Prof. G. Hinrichs, Iowa City, Iowa, reports the average magnetic diurnal range in declination as 8.7 minutes.

Telegraphic communication interfered with by Atmospheric Electricity.—Santa Fe, 5th, 15th, 17th, 18th, 21st, 24th; 11th, severe thunder-storm, telegraphic instruments cut out; 12th, severe thunder-storm, lines worked with difficulty; 19th, 20th, 27th, severe thunder-storm, wires cut out. Concho, Tex., 13th, 14th, 26th. Griffin, Tex., 26th. Laredo, Tex., 25th. Boerne, Tex., 26th to 29th. Burlington, Iowa, 31st. Pembina, Dak., 6th, electricity intense, wires entirely unmanageable, “sparks from switch-board to lightning arrester two feet in length; 18th, instruments and wires completely unmanageable, continually emitting sparks, although cut out, lightning arrester fused; at Grand Forks wires were burued up; 25th, earth currents very strong, interfered with lines; 29th to 31st, electrical disturbance continued throughout entire days. Sandy Hook, N. J., 9th, 21st.

OPTICAL PHENOMENA.

Solar Eclipse.—A summary of the observations of the Solar Eclipse of July 29th will appear in the REVIEW for August.

Solar Halos.—1st, Tex. 3rd, Ohio. 4th, Ohio, S. C. 5th, Ohio, Miss. 6th, Ala., R. I., Ind., Miss., Ohio. 7th, Ala., La., Ohio, Ga., Ind., Miss. 8th, Ohio, Neb. 9th, Ill., Pa. 10th, Ill. 11th, Ohio, Ill., N. H., N. Y. 12th, Ala., Ohio, Ga., N. H. 13th, Ga. 16th, Neb., N. Y., R. I., Conn., N. H. 19th, Ill., N. Y. 20th, Ohio, Fla., Ill., Ind. 21st, Dak. 22nd, Ohio. 23rd, Ill., Mo. 25th, Ohio, N. Y., R. I., Conn. 26th, Ga., Ohio. 27th, N. Y. 28th, Tex., S. C., Ill., Ind., Mich., N. Y., Ohio, Pa. 29th, Tex., S. C., N. Y., R. I., Conn., Mass., N. H., Me., Vt. 30th, Fla., Ohio, Wis. 31st, N. Y.

Lunar Halos.—3rd, Ind. 4th, Tex., Ind. 5th, Tex., N. Y., Ohio. 7th, Tex., La., Ohio. 7th, Tex., S. C., Dak. 8th, Tex., Iowa, Ga., Va., Ohio, Utah. 9th, Kan., Tex., Ala., Mo., Ky., Ohio. 10th, Col., Tex., La., Mo., Pa., Ky. 11th, Tex., La., Mo., Minn., Ohio, N. C. 12th, Cal., Tex., Fla., Mo., Ohio. 13th, Tex., Ga., Mo., Va. 14th, Minn., Mich. 15th, Dak., Iowa, Minn., Ohio. 16th, Mich., N. Y., N. J., Me., Tenn. 17th, Ga., N. C., Va. 18th, Ohio, Conn. 19th, N. Y., Ohio. 20th, Tex., Iowa.

Mirage.—New Haven, Conn., 31st, over Long Island Sound.

Miscellaneous.—On the 2nd, at Tybee Island, Ga., 5 p. m., “a double rainbow was observed in an apparently cloudless sky.” 29th, at Louisville, Ky., “the following curious phenomenon was observed during the solar eclipse:—a bow, almost complete and somewhat similar to a rainbow, formed on the translucent clouds about 10° west of zenith, in the reverse position to that of a rainbow; had the circle been complete, the zenith would have been near the centre.” Lieut-Commander Chas. H. Craven, U. S. Navy, observer at U. S. Navy Yard, Mare Island, Cal., reports as follows:—“June 7th—although the sky was completely overcast, the hills and all objects on them were completely visible. I could distinguish trees (single) at more than twenty miles, and see the chimneys and windows in houses over eighteen miles; even the posts and rails of fences could be counted at eight or ten miles to the eastward.”

MISCELLANEOUS PHENOMENA.

BOTANICAL.—*Alabama.*—1st, in northern portion of state, wheat crop seriously cut off by rust; cotton generally good, and blooming well, some abandoned on account of successive rains; corn crops fine. These conditions also obtain in western Tennessee, northern Mississippi and northern Arkansas. *Canada*—11th,